



**Kohei  
Tamura**

**Comparison between Visualized  
Hydraulic Fractures and Seismic Event  
Hypocenters**



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**Kohei Tamura, Isao Kurosawa (JOGMEC)  
Makoto Naoi, Youqing Chen (Kyoto University)  
Hironori Kawakata (Ritsumeikan University)  
Tsuyoshi Ishida (Kyoto University)**



**Visualized  
Hydraulic  
Fracture  
Project**

This presentation introduced the following paper:

Monitoring hydraulically-induced fractures in the laboratory using acoustic emission and the fluorescent method, Naoi et al., 2018, *International Journal of Rock Mechanics and Mining Sciences*, **104**, 53-63.

The followings are the related works:

Method for visualizing fractures induced by laboratory-based hydraulic fracturing and its application to shale samples, Chen et al., 2018, *Energy*, **11**, 1976.

Moment tensor analysis of acoustic emissions induced by laboratory-based hydraulic fracturing in granite, Yamamoto et al., 2019, *Geophysical Journal International*, **216**, 1507-1516.